

AN 1988:611987 CAPLUS
 DN 109:211987
 ED Entered STN: 10 Dec 1988
 TI Epoxy resin molding materials with high heat conductivity and a balance of moldability and wear resistance
 IN Kuroki, Shinichi; Tanimoto, Shinichi
 PA Sumitomo Bakelite Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 2 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08G059-18
 ICS C08G059-18
 ICA C01F007-02; C08K003-22; C08K009-00
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63120725	A2	19880525	JP 1986-266593	19861111 <--
	JP 06051778	B4	19940706		
PRAI	JP 1986-266593		19861111		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 63120725	ICM	C08G059-18
	ICS	C08G059-18
	ICA	C01F007-02; C08K003-22; C08K009-00
	IPCI	C08G0059-18 [ICM,4]; C08G0059-18 [ICS,4]; C01F0007-02 [ICA,4]; C08K0003-22 [ICA,4]; C08K0009-00 [ICA,4] <--

AB The title materials contain a filler comprising α -alumina particles having their surfaces modified to γ -alumina. Thus, Epiclon N-665EXP (epoxy resin) 130, a hardener 60, a hardening accelerator 2, a coupler 4, a release agent 4, and surface-modified alumina 800 parts were roll kneaded at 100° for 3 min to prepare a molding material having spiral flow 60 cm, number of failures 0/60 on filling, increase of the diameter of an Al nozzle (diameter 1 mm) 7 μ m in the flow test, and thermal conductivity 80 + 10⁻⁴ cal/cm-s-°C, vs. 15, 50/60, 2, and 23 + 10⁻⁴, resp., with fused silica instead of alumina.

ST heat cond epoxy alumina; moldability epoxy filler alumina; wear resistance epoxy alumina; alumina filler epoxy molding

IT Abrasion-resistant materials
 Thermal conductors
 (epoxy resin moldings, alumina-filled)

IT Epoxy resins, uses and miscellaneous
 RL: USES (Uses)
 (molding compns., fillers for, surface-modified alumina as)

IT 1344-28-1, α -Aluminum oxide, uses and miscellaneous
 RL: USES (Uses)

(fillers, epoxy resins containing, moldable, heat-conducting)

IT 110617-21-5, Epiclon N-665EXP

RL: USES (Uses)
 (molding compns., fillers for, surface-modified α -alumina as)

=>

RN 110617-21-5 REGISTRY
ED Entered STN: 10 Oct 1987
CN Epiclon N 665EXP (9CI) (CA INDEX NAME)
OTHER NAMES:
CN N 665EXP
ENTE An o-cresol novolak epoxy resin (Dainippon Ink and Chemical Co.)
MF Unspecified
CI COM, MAN
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

11 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

DERWENT-ACC-NO: 1988-185241

DERWENT-WEEK: 198827

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TITLE: Epoxy! resin moulding material having high heat conductivity- contains alpha-alumina as filler, the surface of which is converted into gammaalumina

PATENT-ASSIGNEE: SUMITOMO BAKELITE CO[SUMB]

PRIORITY-DATA: 1986JP-0266593 (November 11, 1986)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAINIPC
<u>JP 63120725 A</u>	May 25, 1988	N/A	002	N/A
JP 94051778 B2	July 6, 1994	N/A	002	C08G 059/18

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 63120725A	N/A	1986JP0266593	November 11, 1986
JP 94051778B2	N/A	1986JP0266593	November 11, 1986
JP 94051778B2	Based on	JP 63120725	N/A

INT-CL (IPC): C01F007/02, C08G059/18 , C08K003/22 , C08K009/00 , C08L063/00 , H01L023/29 , H01L023/31

ABSTRACTED-PUB-NO: JP 63120725A

BASIC-ABSTRACT:

Epoxy resin moulding material having high heat conductivity contains as filler, alpha-alumina in which the surface is converted into gammaalumina.

The moulding material contains epoxy resin selected from bisphenol epoxy resin, phenol novolak epoxy resin and cresol novolak epoxy resin, surface modified alumina prep. by melting alpha-alumina in a specific flame melting furnace in a moment, curing agent selected from amine, acid anhydride and phenol novolak, curing accelerator and parting agent.

USE/ADVANTAGE - The epoxy resin material has good moulding property and wear resistance and high heat conductivity and is useful as moulding materials.

CHOSEN-DRAWING: Dwg.0/1

TITLE-TERMS: POLYEPOXIDE RESIN MOULD MATERIAL HIGH HEAT CONDUCTING CONTAIN ALPHA ALUMINA FILL SURFACE CONVERT GAMMA ALUMINA

DERWENT-CLASS: A21

CPI-CODES: A05-A01B; A08-M09C; A08-R; A09-A01A;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1544U

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0035 0069 0226 1277 1282 3184 1357 1359 1369 2002 2020 2198 2218 2287 2294 2299 2302 2307 2315 2333 24932545 2560 2657 3252 2665 2738 3279
Multipunch Codes: 014 02& 06- 106 140 15- 20- 213 214 215 216 220 226 231 240 273 299 303 308 310 311 314 335 336 341 359 392 394 395 437 473 476 512 5254& 58& 597 598 600 604 606 623 627 721

SECONDARY-ACC-NO:

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 63-120725

(43)Date of publication of application : 25.05.1988

(51)Int.Cl.

C08G 59/18
C08G 59/18
// C01F 7/02
C08K 3/22
C08K 9/00

(21)Application number : 61-266593

(71)Applicant : SUMITOMO BAKELITE CO LTD

(22)Date of filing : 11.11.1986

(72)Inventor : KUROKI SHINICHI
TANIMOTO SHINICHI

✓ (54) HIGHLY HEAT-CONDUCTIVE EPOXY RESIN MOLDING MATERIAL

(57)Abstract:

PURPOSE: To obtain the title material excellent in moldability, abrasion resistance and thermal conductivity, by using α -alumina with a specially treated surface layer as a filler.

CONSTITUTION: α -Alumina is instantaneously fused in a special flame fusing furnace to obtain slightly round specially treated α -alumina (B) whose surface layer is has been modified into γ -alumina. An epoxy resin (A) of, e.g., a bisphenol type is mixed with component B as a filler, an amine, a phenol novolak or the like (C) as a curing agent and, optionally, a cure accelerator, a mold release, or the like (D), and the mixture is kneaded with, e.g., a hot roll at, e.g., 100° C.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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